ABUS Digital Recorder
TVVR30003

User manual

Version 1.0

English

These user manual contains important information for installation and operation.

This should be also noted when this product is passed on to a third party.

Therefore look after these operating instructions for future reference!

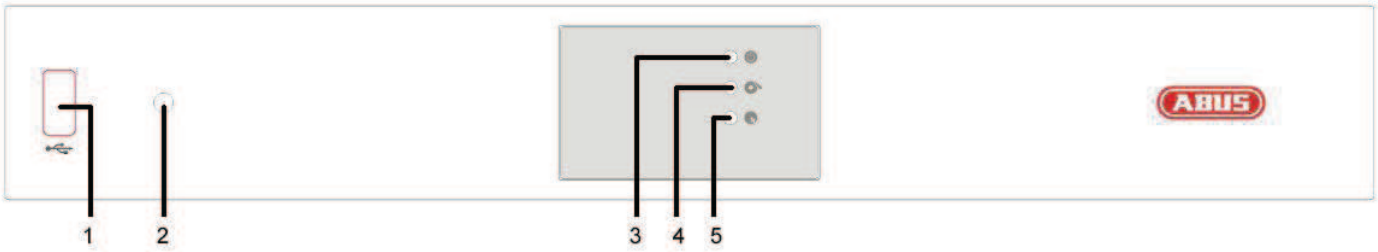
A list of contents with the corresponding page number can be found in the index.

Pay attention to the information on the CD and in the accompanying documentation on “Web server control” and “Clients Software”. These can be found on the Internet at www.abus-sc.com.

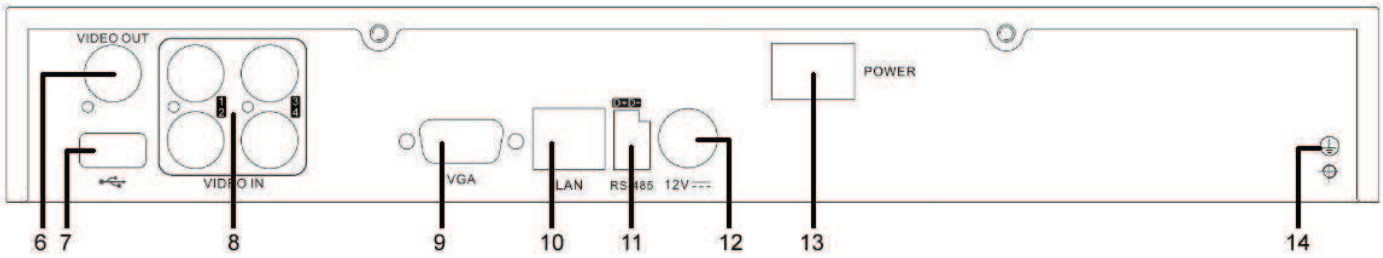
Device overview

See **System operation** on page 13.

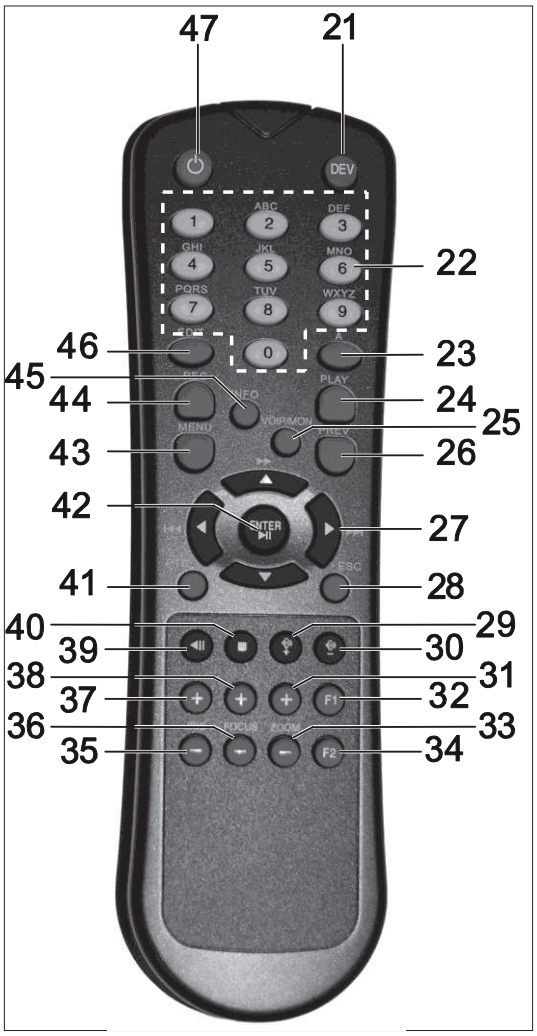
Front



Rear



Remote control



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Quick guide

Before you start

The following preparatory steps must be made:

1. Pay attention to the general information, safety information and notes on setting up and connecting the device (see page 9).
2. Check the contents of the package for completeness and damages.
3. Insert the batteries into the remote control.

Installing the HDD

Warning

Switch off the device and disconnect it from the mains power supply.
Pay attention to the required earthing of the device to avoid static discharge.

1. Install the HDD.
2. Firstly, establish the connection to the motherboard using the red data cable (small connector).
3. Connect the power supply cable.
4. Check that the connections are secure.
5. Close the housing.

Note

Only use HDD's that are approved for video recording and 24/7 usage.

Establishing the connections

Note

Pay attention to the minimum radius when laying cables. Do not kink the cable.

1. Connect the analogue cameras with BNC connections 1 to 4.
2. Connect the monitor to the VGA or BNC connection.
3. Connect the mouse to the USB port.
4. Establish a connection to the mains power supply.
5. Switch on the device using the POWER switch on the rear. The DVR status display on the front of the device lights up.

Configuring the device

- Proceed through the individual steps in the setup wizard (see page 16).
- The following settings are configured in sequence:
  - Language selection for the user interface
  - Administrator setup
  - HDD management (initialisation etc.)
  - Recording settings
  - Network settings

Note

Check the ABUS homepage (www.abus-sc.com) if for this device any firmware updates are available and install these.

- Pay attention to the menu overview on page 29, plus the notes and explanations on basic system operation on page 13.

Pay attention to the notes on the following:

Live view	Page 18
Playback	Page 23
PTZ	Page 25
Data backup	Page 32
Troubleshooting	Page 49

Warning

Note down the admin password.
The following password is preset:

"1 2 3 4 5"

Important safety information

Explanation of symbols

The following symbols are used in this manual and on the device:

Symbol	Signal word	Meaning
	Warning	Indicates a risk of injury or health hazards.
	Warning	Indicates a risk of injury or health hazards caused by electrical voltage.
	Important	Indicates possible damage to the device/accessories.
	Note	Indicates important information.

The following labels are used in the text:

	Meaning
1. … 2. …	Set of tasks or instructions with a defined sequence in the text
• … • …	Set of points or warnings without a defined sequence in the text

Proper use

Only use the device for the purpose which it was designed and built for. Any other use is considered inappropriate.

This device may only be used for the following purpose(s):

- This digital recorder is used in combination with connected video signal sources (B/W and colour cameras) and video output devices (CRT or TFT monitors) for object surveillance.

Note

Data storage is subject to national data-protection guidelines.

During installation, inform your customers regarding the existence of these guidelines.

General information

Before using the device for the first time, read the following instructions carefully and pay attention to all warnings, even if you are already familiar with electronic devices.

Warning

All guarantee claims become invalid for damages caused by non-compliance with these operating instructions.

We cannot be held liable for resulting damages.

Warning

We cannot be held liable in the event of material or personal damage caused by improper operation or non-compliance with the safety information.

All guarantee claims are invalid in such cases.

Keep this manual in a safe place for future reference.

If you pass on or sell the device, you must also include this user manual.

This device has been manufactured in accordance with international safety standards.

Power supply

- Only operate this device through a power source which supplies the mains power specified on the type plate.
- If you are unsure of the power supply at the installation location, contact your power supply company.

Warning

Avoid data loss!
Always use an uninterruptible power supply (UPS) with overvoltage protection.

- Disconnect the device from the mains power supply before carrying out maintenance or installation work.
- The on/off switch does not completely disconnect the device from the mains power supply.
- To disconnect the device completely from the mains power supply, the plug must be disconnected from the mains socket. Therefore, the device should be positioned so that direct and unobstructed access to the mains socket is guaranteed at all times and the plug can be disconnected immediately in an emergency.

- To avoid the possibility of fires, the plug should always be disconnected from the network socket if the device is not used for long periods. Disconnect the device from the mains power supply before impending electrical storms, or use an uninterruptible power supply.

Warning

Never open the device on your own! There is a risk of electric shocks!
If it is necessary to open the device, consult trained personnel or your local maintenance specialist.

- The installation or modification of a HDD should only be made by trained personnel or your local maintenance specialist.

Warning

The installation of additional equipment or modification of the device invalidates your guarantee if not carried out by trained personnel.
We recommend having the HDD installed by a maintenance specialist.
Your guarantee is invalidated in the event of improper installation of the HDD.

Overloading / overvoltage

- Avoid overloading of mains sockets, extension cables and adapters as this can result in fires or electric shocks.
- Use overvoltage protection to prevent damages caused by overvoltage (e.g. electrical storms).

Cables

- Always hold cables by the connector, and do not pull the cable itself.
- Never touch the mains cable with wet hands, as this can lead to a short circuit or electric shock.
- Never position the device, furniture or other heavy items on the cable. Ensure that the cable does not become kinked, especially on the connector and sockets.
- Never knot the cable, and do not tie it to other cables.
- All cables should be laid so that they cannot be stepped on or cause an obstruction.
- A damaged mains cable can cause a fire or electric shock. Check the mains cable from time to time.
- Never modify or manipulate the mains cable or plug.
- Do not use plug adapters or extension cables that do not conform to the applicable safety standards, and do not make alterations to power supply cables or mains cables.

Installation location / operating environment

- Position the device on a firm, level surface and do not place any heavy objects on the device.
- The device is not designed for operation in rooms subject to high temperatures or moisture (e.g. bathrooms), or in excessively dusty rooms.
- Operating temperature and ambient humidity:
  -10 °C to 55 °C, maximum 85% relative humidity. The device may only be operated in moderate climate conditions.

Ensure the following:

- Sufficient ventilation must be present at all times (do not place the device in a storage rack, on thick carpets, on a bed or anywhere where the ventilation slots are covered. Make sure that a gap of at least 10 cm is present on all sides).
- The device must not be exposed to direct heat sources (e.g. heaters).
- The device must not be exposed to direct sunlight or strong artificial light.
- The device must not be placed in close proximity to magnetic fields (e.g. loudspeakers).
- Naked flames (e.g. candles) must not be placed on or near the device.
- Contact with spraying or dripping water and aggressive liquids must be avoided.
- The device must not be operated in close proximity to water, and must not be submerged under any circumstances (do not place objects containing water on or near the device, such as vases or drinks).
- Foreign objects must not penetrate the device.
- The device must not be exposed to strong variations in temperature, as this can lead to condensation and electrical short circuits.
- The device must not be exposed to excessive jolts or vibrations.

Remote control

- Remove all batteries if the device will not be used for a sustained period, as these can leak and damage the device.

Care and maintenance

Maintenance is necessary if the device has been damaged. This includes damage to the plug, mains cable and housing, penetration of the interior by liquids or foreign objects, exposure to rain or moisture or when the device does not work properly or has fallen.

- Disconnect the device from the mains power supply before maintenance (e.g. cleaning).
- If smoke develops or unusual noises or odours are detected, then switch off the device immediately and pull the mains plug from the socket. In such cases, the device should not be used until it has been inspected by a qualified technician.
- Maintenance work should only be carried out by qualified specialists.
- Never open the housing on the device or accessories. There is a risk of fatal injury due to an electric shock when the housing is opened.
- Clean the device housing and remote control with a damp cloth.
- Do not use solvents, white spirit or thinners as these can damage the surface of the device.
- Do not use any of the following substances:
- Salt water, insecticides, solvents containing chlorine or acids (ammonium chloride) or scouring powder.
- Gently rub the surface with a cotton cloth until it is completely dry.

Warning

The device works under dangerous voltages. The device must only be opened by authorised specialists. All maintenance and service work must be carried out by authorised firms. Improper repairs can expose device users to the risk of fatal injury.

Accessories

- Only connect devices that are suitable for the intended purpose. Otherwise, hazardous situations or damage to the device can occur.

Putting into operation

- Observe all safety and operating instructions before putting the device into operation for the first time.
- Only open the housing to install the HDD.

Warning

When installing the device in an existing video surveillance system, ensure that all devices are disconnected from the mains power supply and low-voltage circuit.

Warning

If in doubt, have a specialist technician carry out assembly, installation and connection of the device.

Improper or unprofessional work on the mains power supply or domestic installation puts both you and other persons at risk.

Connect the installations so that the mains power circuit and low-voltage circuit always run separately from each other. They should not be connected at any point or become connected as a result of a malfunction.

Children and the device

- Do not allow children access to electrical devices. Never allow children to use electrical devices without supervision. Children may not be able to accurately detect possible risks. Small parts can be life-threatening if swallowed.
- Keep batteries away from small children. Call for medical assistance immediately if a battery is swallowed.
- Keep packaging materials away from children (danger of suffocation).
- This device should not be used by children. If used improperly, spring-loaded parts can be ejected and cause injuries to children (e.g. eye injuries).

Introduction

Dear customers,

Thank you for purchasing this product.

This product complies with current domestic and European regulations. Conformity has been proven, and all related certifications are available from the manufacturer on request (www.abus-sc.com).

To maintain this status and to guarantee safe operation, it is your obligation to observe these operating instructions!

Read the entire operating manual carefully before putting the product into operation and pay attention to all operating and safety information!

All company names and product descriptions are trademarks of the corresponding owner. All rights reserved.

In the event of questions, please contact your local maintenance specialist or dealer.

Disclaimer

These operating instructions have been produced with the greatest care. Should you discover any missing information or inaccuracies, please contact us under the address shown on the back of the manual. ABUS Security-Center GmbH does not accept any liability for technical and typographical errors, and reserves the right to make changes to the product and operating instructions at any time and without prior warning. ABUS Security-Center GmbH is not liable or responsible for direct or indirect damages resulting from the equipment, performance and use of this product. No forms of guarantee are accepted for the contents of this document.

General information

In order to use the device correctly, read this user manual carefully and keep it in a safe place for later use.

This manual contains instructions on recorder operation and maintenance. Consult an authorised specialist if the device needs to be repaired.

Unpacking the device

Handle the device with extreme care when unpacking it.

The packaging is made of reusable materials, and should always be passed on for recycling.

We recommend the following:

Paper, plastic packaging, cardboard and corrugated cardboard should be disposed of in the appropriate recycling containers.

If recycling containers are not available in your local area, then you can dispose of these materials as domestic waste.

If the original packaging has been damaged, inspect the device. If the device shows signs of damage, then return it in the original packaging and contact the manufacturer.

Scope of delivery

- ABUS Digital Recorder
- Power supply unit and mains cable
- USB mouse
- Connection cable and screws for HDD
- Software CD
- User manual Quick guide

System operation

General information

The device can be controlled as follows:

- Using the remote control
- Using the USB mouse

Operating elements on the device

Note
Pay attention to the overview on page 3.

No.	Name Function
1	**USB port** • To connect a USB mouse • To connect a USB stick for data backups
2	**IR receiver** For the remote control
3	**Power LED** Lights up blue when the system is switched on
4	**HDD LED** Flashes blue when the HDD is accessed
5	**Network LED** Lights up red when the network is accessed

Connections on the rear of the device

Note
Pay attention to the overview on page 3.

No.	Name Function
6	**VIDEO OUT:** BNC monitor output
7	**USB port** • To connect a USB mouse • To connect a USB stick for data backups
8	**VIDEO IN:** BNC inputs
9	**VGA:** VGA monitor output
10	**LAN:** 10/100 MBit Ethernet LAN connection
11	**RS-485:** Connection for PTZ cameras
12	**12 V DC power socket**
13	**Power switch and mains power connection:** • 100–240 V AC, 50–60 Hz
14	**Connection for earthing line**

Operating elements on the remote control

Note
Pay attention to the remote control diagram on page 4.

No.	Name Function
21	**DEV:** Assigns the remote control with the device ID
22	**Alphanumeric keys:** • Selects the camera (channel) in the live view • Entry of letters and digits in system fields
23	**A:** Changes the entry format (upper / lower case, symbols, digits)
24	**PLAY:** Starts playback
25	**VOIP:** • Not used
26	**PREV:** Changes the screen display in the live view
27	**Navigation keys:** During playback: • ▲, ▼ Sets the speed • ◀, ▶ Previous / next day In the live view: • Selects the camera (channel selection) In menus: • Navigation
28	**ESC:** • Not used
29	Not used
30	Not used
31	**Zoom +:** Zooms in on the image section in PTZ mode
32	**F1:** In lists: • Selects all available options
33	**Zoom -:** Zooms out of the image section in PTZ mode
34	**F2:** Switches between tabs
35	**IRIS-:** In PTZ mode: • Closes the iris
36	**Focus-:** In PTZ mode: • Brings the image section into focus
37	**IRIS+**: In PTZ mode: • Opens the iris
38	**Focus+**: In PTZ mode: • Brings the image section into focus
39	**◀II**: Pause / reverse playback

40	■: Stops playback
41	**PTZ:** Switches on PTZ control
42	**Enter ►II:** • Confirms the selection • Ticks / unticks the boxes During playback: • PLAY/PAUSE Single play mode: • Advances by a single frame
43	**MENU:** • Calls up the main menu • Switches the key tones on and off (press and hold down for 5 seconds)
44	**REC:** Opens / starts manual recording
45	**INFO:** • Switches to another monitor in the live view
46	**EDIT:** General use: • Activates the text entry; backspace in text fields
47	**⏻ POWER:** Switches on/off (hold down for 5 seconds)

Mouse operation

Note

Further descriptions in these operating instructions are made with the mouse.

The device is suitable for use with a USB mouse. Connect the mouse to the USB port.

Button	Function
Left	**Single-click:** • Selection in menu, activation of an entry field or tab **Double-click:** • Switches between the screen display of single and multiple images in the live view and during playback **Click and drag:** • In PTZ mode: Camera control
Right	**Single-click:** • Calls up the pop-up menu
Scroll wheel	**In the live view:** • Shows previous / next camera **In menus:** • Scrolls through the menus

On-screen keyboard

The on-screen keyboard appears after clicking on a text entry field with the mouse:

The keys have the same function as on a computer keyboard.

- To enter the character, left-click the mouse.
- To finish data entry, press **Enter**.
- To delete the character in front of the cursor, click on ⬅.
- To switch between upper and lower case, click on the framed **a** symbol. The current setting is displayed above the keyboard.
- To cancel the entry or exit the field, press ESC.

Starting the device

Important

The device must only be operated with the mains power specified on the type plate.

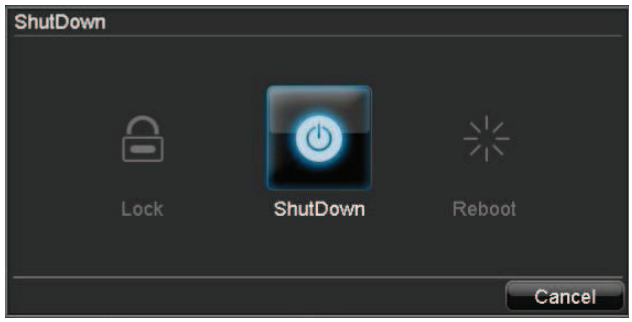
For safety reasons, use an uninterruptible power supply (UPS).

After the device has been connected to the power supply and the main switch on the rear of the device is switched on, the DVR status LED lights up.

1. The device carries out a self-test during the start-up procedure.
2. The setup wizard appears. Exit the wizard to access the live view.

Switching off, locking and rebooting the device

Click on “ShutDown” in the main menu. The overview appears.



1. To switch off the device, select **ShutDown** and confirm by pressing **Yes**. The device is then switched off.
   - Do not press any keys during the shutdown procedure.
2. To lock the system, select the corresponding **Lock** symbol on the left. The user interface is now locked and a password must be entered to access the menu.
3. To reboot the device, select the corresponding **Reboot** symbol on the right. The device is then rebooted.

Setup wizard

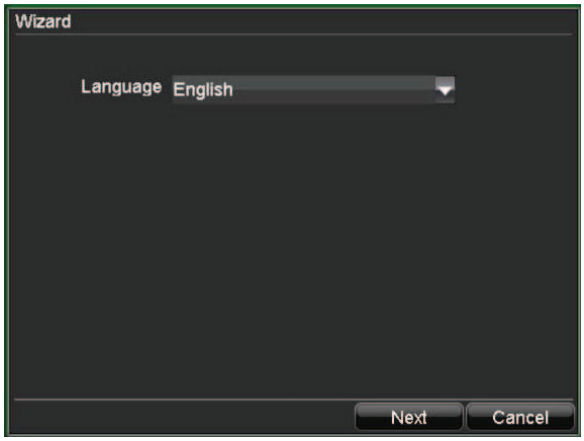
Setting up the system

The setup wizard guides you through the necessary basic system settings. The DVR is then set up for recording and surveillance.

Note

All detailed settings can be found in the device menu (see overview on page 29).

The language selection appears after switching on for the first time:



1. Click the entry field and select the desired language from the list. Click on **Next** to continue. The following query appears:

- Click on “Next” to start the wizard.

Note

After the system is set up, you can untick the box. The setup wizard is then no longer started automatically.

Setting up the administrator

Warning

Note down the admin password.
The following password is preset

“1 2 3 4 5”

1. Click the entry field and enter your admin password.
2. To assign a new password, tick the box next to **New Admin Password**.
3. Enter the new password and confirm in the field below.
4. Click on **Next**.

HDD Management

1. Click on “Enter”.

2. To set up a new HDD, tick the box and then click on **Init**.

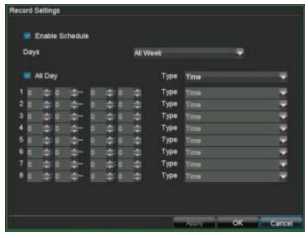
Warning
All data on the drive is deleted!

3. Confirm the prompt by pressing **OK**. The HDD is then set up for operation. The progress is displayed on the status bar.
4. Exit the setting by pressing **OK**, then click on **Next**.

Record Settings

1. Click on “Enter”.

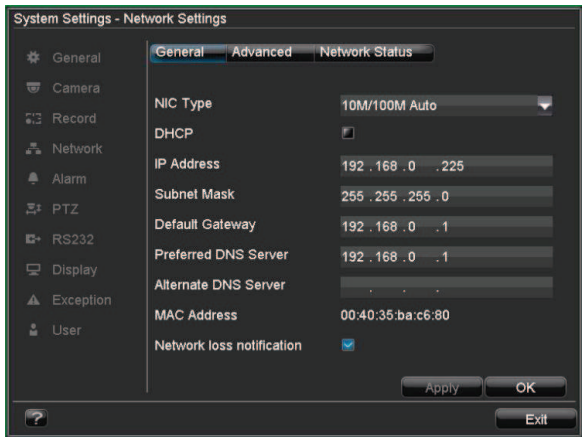
2. Select the camera in the “General” tab and specify the settings.
3. Click on the “Schedule” tab and then on **Edit**.



4. Tick the “Enable Schedule” box and **All Day**. Recording is then switched on for the entire day.
5. Exit the setting by pressing **OK**. The settings are displayed in colour in the schedule overview.
6. To transfer this schedule to other cameras, first select the camera (or “All” if all cameras should have the same settings) and confirm by pressing **Copy**.
7. Exit the setting by pressing **OK**, then click on **Next**.

Network Settings

1. Click on “Enter”.



Note
To check whether DHCP can be selected (or if you have to set the IP address and other settings manually), consult your network administrator.

2. **DHCP activated:** If DHCP is set up in the network router, then tick the DHCP box. All network settings are then made automatically.
3. **DHCP not activated:** Enter the data manually (IP address, subnet mask and default gateway = IP address of the router).

   A typical address specification is as follows:

   - IP address: 192.168.0.50
   - Subnet mask: 255.255.255.0
   - Default gateway: 192.168.0.1
   - Preferred DNS server: 192.168.0.1
4. Exit the setting by pressing **OK**, then click on **Next**.

Live view

Overview

The live view starts automatically after the device is switched on.

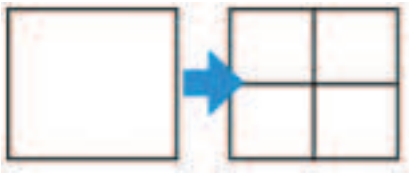
You can also go back to the live view by pressing the **Menu** key repeatedly.

The following menus are found in the screen header:

- Menu
- Playback
- PTZ

The view pop-up menu is found on the right. The time and date are displayed on the right.

- To open the view pop-up menu, click on the rectangular symbol at the top-right of the menu bar.
- Click on one of the symbols to switch between the different views.



The signals of the connected cameras are displayed on the main screen.

- By double-clicking the left mouse key, you can display the camera image as a full-screen view or switch back to the original view.

Status symbols

- The following symbols are displayed depending on the operating status of the device:

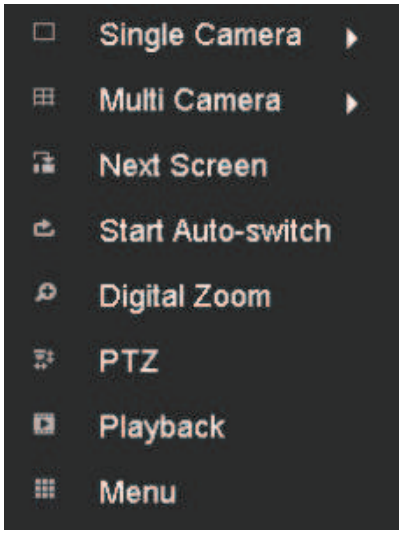
Symbol	Meaning
	Event detected • Motion detection, HDD error etc.
R	Red: Recording • Event recording
R	Blue: Recording • Continuous recording

Pop-up menu for mouse operation

Note

Press the right mouse button when the cursor is positioned on a live image.

The following settings can be made. The arrow pointing to the right indicates that a sub-menu is opened for selection:



Single Camera	Full-screen view for selected camera
Multi Camera	Various camera layouts
Next Screen	Displays the next camera(s)
Stop Auto-switch	Starts the camera sequence
Digital Zoom	Zooms in on the image section
PTZ	Activates PTZ mode
Playback	Switches to playback mode
Menu	Opens the main menu

Note

Stop Auto-switch:
Specify the delay in the image sequence in the display settings.

Digital Zoom

This function opens an image which has been enlarged by four times.

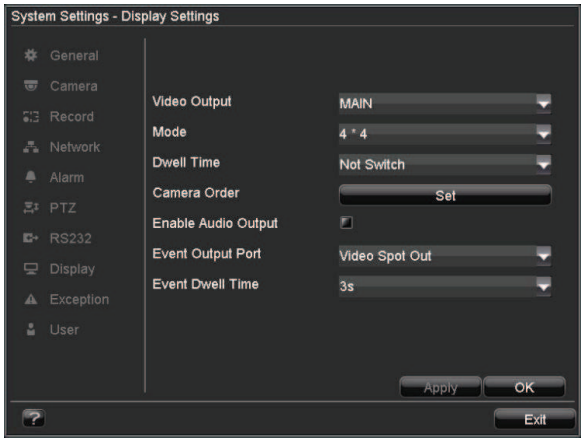
- Left-click the mouse in the small image window and pull a frame around the image section to be zoomed in on whilst holding the button down.
- The selected section is then digitally zoomed.
- To exit the image, first right-click the mouse and then left-click on “Exit”.

System Settings

Note

The live view can be set as follows.

Open the main menu, then click on “System Settings” and then “Display Settings”:



Video Output	VGA, monitor, AUX (CVBS) Selects the connection where the settings should be changed
Mode	Various camera layouts
Dwell Time	Switching time between the individual cameras in “Stop Auto-switch”
Camera Order	Camera order in the live view
Enable Audio Output	Activates / deactivates audio output on the video output
Event Output Port	Used to assign a monitor for event output
Event Dwell Time	The period where the event is displayed on the assigned monitor (in seconds)

Note

VGA monitor connected:
A connected VGA monitor automatically becomes the main monitor where the audio output is also assigned. The BNC output Video Spot Out output displays the cameras in sequence and in full screen.

If during the boot process of the DVR the VGA cable is not connected, the main video signal is displayed at BNC output MAIN. Connect the VGA cable and reboot the DVR in order to display the main video signal at the VGA output.

No VGA monitor connected:
The main video signal is displayed at BNC output MAIN. The BNC output Video Spot Out output displays the cameras in sequence and in full screen.

Setting the camera output

Up to 16 cameras can be set simultaneously in the live view.

1. Click on “Set”.
2. Select the display mode.
   - 1 x 1
   - 2 x 2
3. The camera signal is assigned to the corresponding image section using the navigation keys.
   - “X” means that this camera is not displayed.
4. Click on OK to accept the settings.

Record Settings

Set-up

Open the main menu, then click on “System Settings” and then “Record Settings”:

General settings

The following settings can be made in the “General” tab:

Camera	Camera to be set
Stream	Stream 1: Properties for continuous recording Stream 2: Properties for event recording Stream 3: Properties for network transmission
Stream Type	Video Video & Audio
Resolution	4 CIF CIF QCIF
BitRate Type	In general, the higher the bit rate, the more storage space is required. Variable: Static image – low bit rate; dynamic image – high bit rate Constant: Bit rate remains constant (at maximum bit rate)
Video Quality	There are various quality levels: +: Low quality ++++++: High quality
Frame Rate	Number of images saved per second. The maximum number is dependent on the set resolution.
Max. BitRate (Kbps)	Defines the maximum bit rate for the “Constant” bit rate type

More Settings		Detailed settings
	Pre-alarm	Recording period before an alarm (in seconds)
	Post-alarm	Recording period after an alarm (in seconds)
	Expiration	Period (in days) after which the recording is deleted automatically at 00:00. The event remains in the log file. 0: Recordings are not deleted automatically
Copy To		Copies the selected settings to other cameras (all or selected)

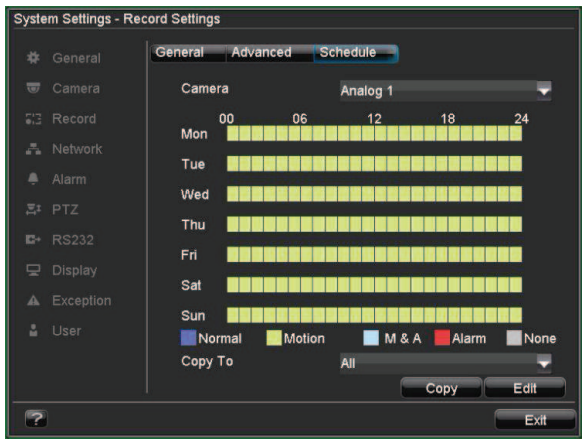
1. Select the camera.
2. Select the stream where the specifications should be defined:
   - Stream 1 (Continuous)
   - Stream 2 (Event)
   - Stream 3 (Network)
3. Define the recording parameters for the corresponding stream (see table).
4. Under “More Settings”, select the period for the pre-alarm, post-alarm etc.
5. Select the cameras where you wish to copy the settings under “Copy To”, then confirm by pressing “Copy”.

Advanced settings

In the “Advanced” tab, you can specify whether older recordings are deleted when the HDD memory is full.

Schedule

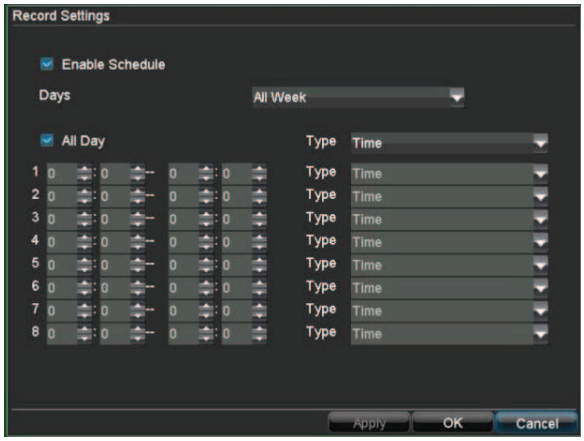
The schedule is used to specify the recording times and triggers (recording type) for the cameras. Click on the “Schedule” tab:



In the OSD, the hours of the respective days are listed from left to right (the days are listed from top to bottom). A colour key is shown underneath the days (i.e. the recording periods in the schedule are shown in colour according to the trigger (recording types)).

Colour symbol	Key
Blue	Normal recording: Period in hours
Green	Motion detection
Grey	No selection

1. Select the camera to be set up, then click on “Edit”:



2. Tick the “Enable Schedule” box.
3. In the drop-down menu next to “Days”, either specify the day to be set or select “All Week”.
4. Tick or untick the “All Day” box. When “All Day” is selected, defined times cannot be entered. The setting then applies for the entire day.
5. To make specific time settings, untick the “All Day” box.
6. Specify the recording type in the drop-down menu:
   - Time
   - Motion detection
7. When making a specific time setting, you can define up to 8 time periods (each from 00:00 to 00:00). The times in the individual periods must not overlap.

Note

The “Time” recording type defines the time window where a recording is made.

The other events (e.g. motion detection) only trigger the recording after the specific event has occurred.

- The camera settings can be copied and applied to all cameras in the “Schedule” tab.
  - Select the camera under “Copy” (or select “All”), then confirm by pressing “Copy”.

8. Exit the settings in the recording screen by pressing OK.

Manual Record

1. Press REC to start manual recording:

2. Select the camera to start manual recording by clicking the corresponding button.

Note

Click “All” to record all connected cameras.

Playback

General information

Playback can be made in three different ways:

- Through the video search in the main menu
- From the live view
- Through the log file in the maintenance menu

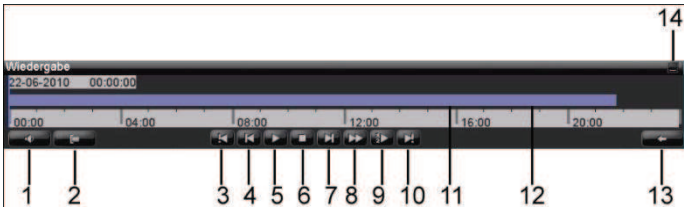
Playback screen

Playback is controlled on the control panel:

No.	Area
❶	Running playback with date and time
❷	Used to select the camera for feedback
❸	Calendar with recording type (see right)
❹	Control panel with time bar

Using the control panel

The control panel is used for controlling the running playback. The symbols have the following meaning:



No.	Meaning / function
1	Switches audio playback on/off
2	Defines the start and end point of a video for data backup
3	Previous recording / day
4	Goes back 30 seconds
5	Play
6	Stop
7	Advances 30 seconds
8	Fast-forward
9	Slow-motion advance
10	Next recording / day
11	Time bar: • Click on the time bar with the mouse to continue playback from another point • To start playback from a specific time, click on the slider and drag it to the required time
12	Recording type Blue = Continuous recording Red = Event recording
13	Exits playback
1	Hides the control panel

Note

You can zoom in on the screen image.

- Right-click in the running playback.
- Select “Zoom”.
- Zoom mode is now active (see page 19).

Playback through video search

In order to play recorded events, they must first be found. Open the main menu and then click on “Video Search” in the “General” tab:

The following settings are available:

Camera	Camera to be set
Video Type	Schedule, motion detection, manual recording, all
File Type	Locked, unlocked, all
Start Time End Time	Enter the date and time
Details	Opens the detailed view. The cameras are listed in sequence. The colour key shows the corresponding recording type. You can then access the recordings by going to the day after or day before. The markings on the time bar can be moved using the mouse to limit the time period for the search.

- Click on **Search** to search for recordings with the corresponding settings. The results are then shown:

- Select the recording by clicking on the line and then on **Play**.

Playback: Advanced video search

- In the “Video Search” screen, click on the “Event” tab to search for specific recordings which were triggered either by a motion detection.
- Enter the search criteria (e.g. date, time, cameras) to carry out the search.

Playback from the live view screen

Click on playback whilst the live view screen is shown:

Playback is controlled on the control panel:

Note
Playback starts with the recording of the last five minutes.

The playback screen is divided into four areas:

No.	Area
❶	Running playback with date and time
❷	Camera menu
❸	Calendar with recording type Blue = Continuous recording Red = Event recording
❹	Control panel with time bar

1. Select the camera in the camera menu.
2. Click on the calendar to select a specific recording according to the date and time.
3. Control the playback as follows:
   - Using the control panel
   - Using the mouse (click on the time bar and drag the slider – use the colour key on page 22 to help with the assignment)

PTZ control

General information

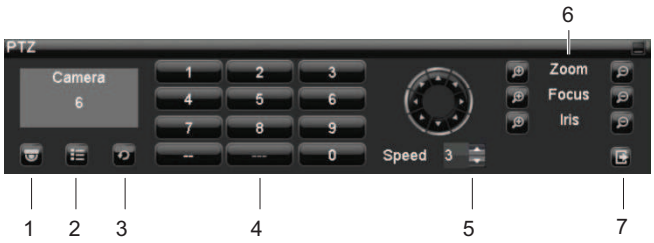
PTZ control is used to access individual PTZ cameras and control them manually.

Note

When using ABUS PTZ-Cameras there is the option to configure tours directly in the camera. The advantage is that other control devices, e.g. keyboard, can call the tours as well.

- In order to open the menu of ABUS PTZ-Cameras enter Preset 95. By using the navigation buttons you can move within the menu.

Using the PTZ control panel



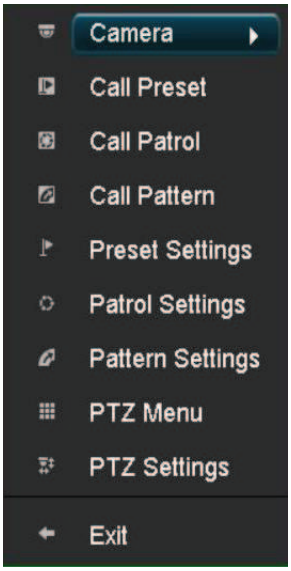
No.	Meaning / function
1	Selects and displays the PTZ camera
2	Call presets
3	Call tours
4	Keypad
5	Speed
6	Zoom, focus and iris adjustment
7	Exits the PTZ control

Pop-up menu for mouse operation

Note

Press the right mouse button when the cursor is positioned on a live image.

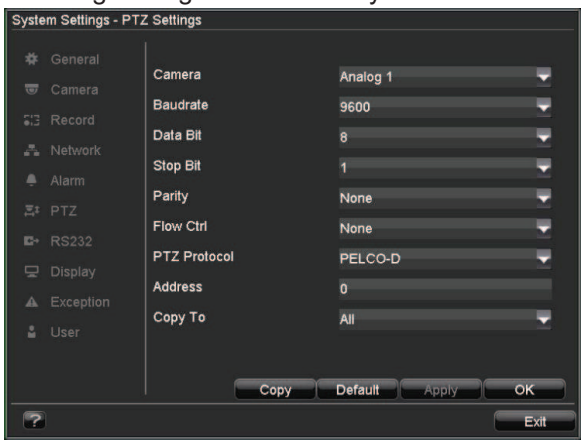
The following settings can be made. The arrow pointing to the right indicates that a sub-menu is opened for selection:



Camera	PTZ camera selection
Call Preset	Selects the set preset
Call Patrol	Selects the specific patrol
Call Pattern	Selects the defined pattern
Preset Settings	See page 26
Patrol Settings	See page 27
Pattern Settings	See page 27
PTZ Menu	Opens the PTZ menu
PTZ Settings	Displays the hardware parameters of the connected camera
Exit	Exits the PTZ control

PTZ Settings

The following settings are necessary on the PTZ camera:



The settings are used for configuring the camera on the corresponding connections.

1. Select the installed camera.
2. Enter the data of the connected camera.
3. The address (ID) is used to clearly identify and control the PTZ camera.
4. If several cameras of the same type are connected, then you can copy the settings to the other connections.
5. Exit the settings by pressing “Apply” and “OK”.

Note

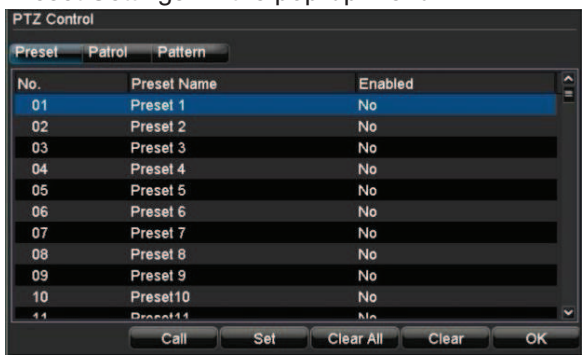
Compare the settings with the technical data of the connected camera.

If a connected camera does not work correctly, then check the entered parameters (baud rate, data bit etc.).

Preset Settings

Presets are previously defined locations of a PTZ camera. Various positions can be defined for each PTZ camera. The cameras can then pan and tilt quickly to the corresponding locations.

- Select the camera in the control panel, then click on “Preset Settings” in the pop-up menu:



1. Pan, tilt and zoom the camera to the desired position.
2. Select “Preset 1” from the list.
3. Click on “Set”. The position is now set as “Preset 1”.
4. Repeat steps 1–3 to define further presets.
5. Exit the settings by pressing “Apply” and “OK”.

Note

When using ABUS PTZ-Cameras with the Pelco-D protocol some presets are predefined and cannot be used.

Preset	Beschreibung
1~64, 100~200	Calls preset 1~64 &, 100~200
65	Display preset Status
66	Starts Auto Scan
67	Auto Flip mode On/Off
68	Camera reset
69	Digital Slow Shutter function On/Off
71~78	Calls tour 1~8
81~88	Calls pattern 1~8
91	Calls zero Position
92	Freezes image
93	BLC-Function On/Off
94	Switches between day / night / auto mode
95	Calls OSD menu
96	Focus adjust
97	Enable/Disable all alarms

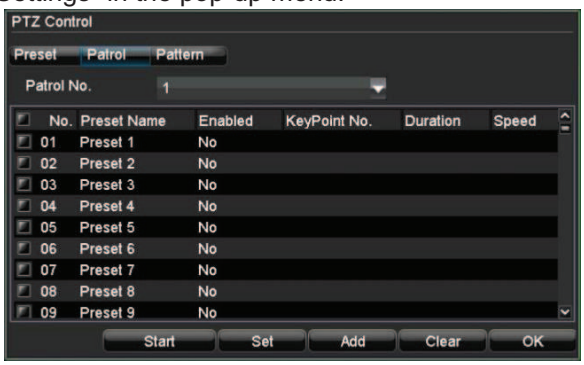
Further information can be found in the manual of the PTZ-Camera.

Tour Settings

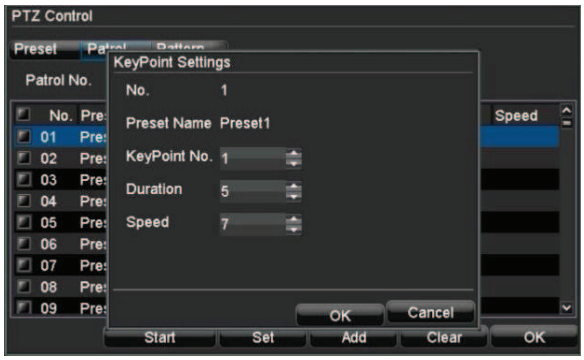
Patrols are defined tours from position to position that are accessed in sequence on the PTZ camera. The individual positions are presets, which should be set as detailed above. The cameras can then each be moved in sequence to the corresponding positions at a defined speed, where they remain for a set period of time.

Setting a tour within the DVR

Select the camera in the control panel, then click on “Patrol Settings” in the pop-up menu:



1. Activate the patrol number.
2. Select an active, set preset from the list by ticking the box.
3. Click on “Set”.



4. Set the key point number, duration and speed.

- KeyPointNo.: Sequence
- Duration: Time that the PTZ camera waits at a position (in seconds)
- Speed (0–7): Speed of camera movement

5. Accept the settings by pressing “Add”.
6. Repeat steps 1–5 to define further patrols.
7. Exit the settings by pressing OK.

Note

A patrol consists of at least two preset positions. You can set several patrols for one camera.

The set patrol can be tested as follows:
Click on “Start” and monitor the patrol. You can stop the patrol at any time and repeat the patrol settings (e.g. to make corrections).

Call a tour set in the PTZ-Camera

You can also configure tours directly in the camera. The advantage is that other control devices, e.g. keyboard, can call the tours as well. Further information on configuring tours in the PTZ-Camera can be found in the PTZ-Camera manual.

To call the tour you can call a predefined preset or setup a tour in the DVR.

1. Activate the patrol number.
2. Select a predefined preset:

Preset	Beschreibung
71	Starts tour 1
72	Starts tour 2
73	Starts tour 3
74	Starts tour 4
75	Starts tour 5
76	Starts tour 6
77	Starts tour 7
78	Starts tour 8

3. Click on “Set”.
4. Accept the settings by pressing “Add”.
5. Exit the settings by pressing OK.

Pattern Settings

Patterns are defined tours from position to position that are accessed in sequence on the PTZ camera. Patterns are recorded live. The system saves the parameters used whilst you move and adjust the cameras in sequence to the corresponding positions at a defined speed.

- Select the camera in the control panel, then click on “Pattern Settings” in the pop-up menu:

1. Select the pattern number.
2. Click on “Run Record” to start the pattern recording.
3. Using the control panel, adjust the camera position and settings that you wish to record as a pattern.
4. The recording is made until “Stop Record” is clicked.

Note

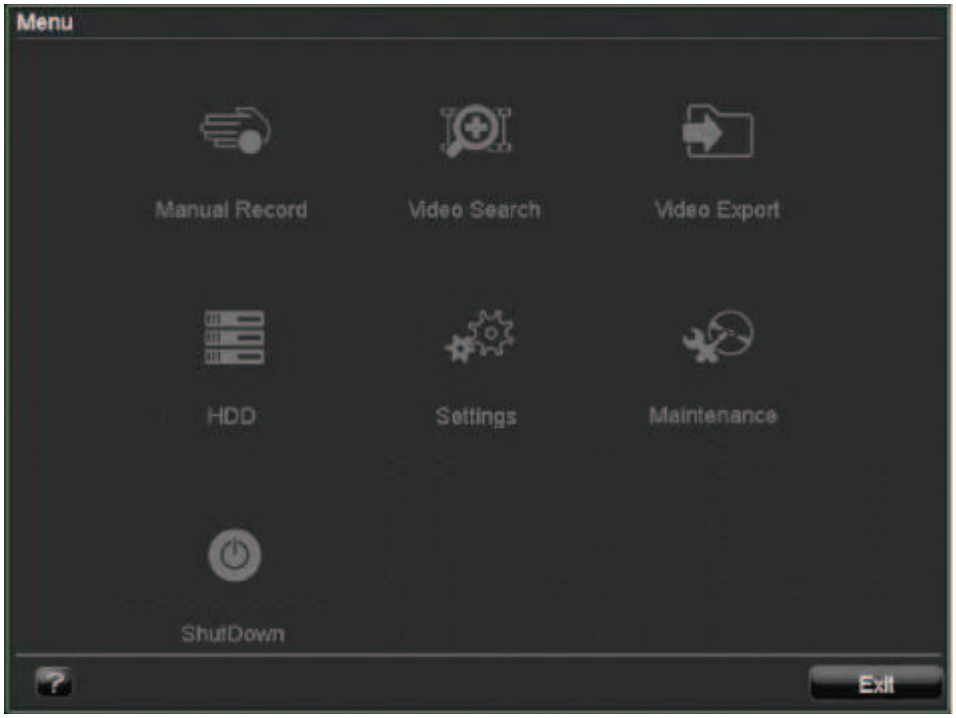
- Start the recorded pattern by calling up the pop-up menu (right-click in the live view of the PTZ camera).
- Click on “Run Pattern” and click on the desired pattern. The PTZ camera now starts moving to the individual positions. After running through the entire pattern, the process is started again.

Device menu

Menu overview

The following overview shows all menus used to set and control the device.

- When the mouse cursor is pointed at a menu, it is marked and a short description of the menu is shown at the bottom.
- Click on the menu to open it.
- Click “Exit” to close the menu overview.



Menu description

Menu	Description	See page...
Manual Record	Starts or finishes manual recording on selected cameras.	30
Video Search	Parameter-based search for recordings started by events (e.g. motion detection).	30
Video Export	Function for exporting saved recordings to USB media.	32
HDD	Used for initialising or managing installed HDDs (assigning read/write functions, cameras, network HDD management etc.).	33
Settings	Used for managing all device settings (General, Camera, Record, Network, PTZ, RS232, Display, Exception, User, UVV).	35
Maintenance	Device maintenance (new firmware update, log search, import/export configuration, reset to factory defaults etc.).	41
ShutDown	Used to lock, shut down and reboot the device.	43

Manual Record

Note

Only active cameras can be selected for manual recording.

The recording starts immediately.

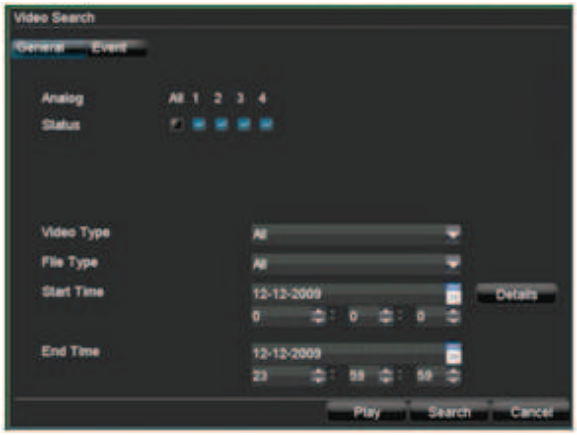
1. Select the camera by ticking the corresponding box.
2. After a camera has been selected, the box changes to **ON**.
3. Click “All” to select all cameras.

Note

Starting manual recording on the control panel:

- Select the camera.
- Press the REC key.

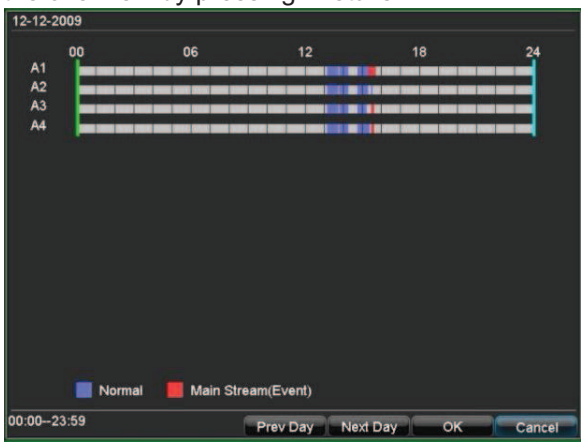
Video Search



Parameters for Video Search

“General” tab	
Analog	Overview of analogue cameras Used for searching the selected cameras
Video Type	Continuous Motion detection Manual recording All
File Type	Unlocked Locked All
Start Time	Date and time
End Time	Date and time
“Event” tab	
Event Type	Motion detection
Start Time	Date and time
End Time	Date and time
Analog	Overview of cameras Used for searching the selected cameras
Start Time	Date and time
End Time	Date and time

1. Set the parameters that should be used for searching for a recording.
2. When searching in the “General” tab, you can open the overview by pressing “Details”:



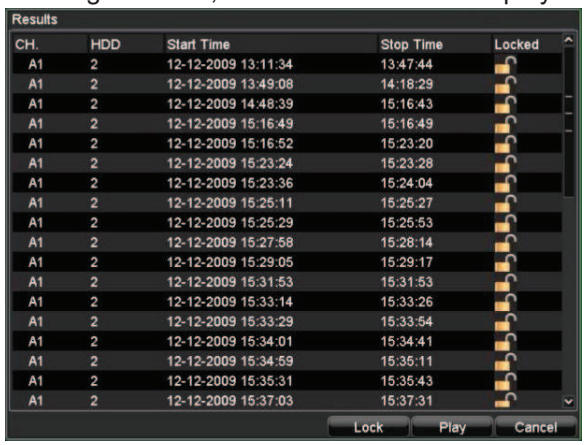
- The recordings on the selected cameras are displayed by day and according to the following colours.
- Blue: Normal
- Red: Event
- You can move the green and blue markers with the mouse to view the recording at a specific time.
- You can scroll through the recordings by day (day after or day before).

3. Start playback by pressing “OK”. The playback screen opens.
4. The control panel is used to control the process.

Note
See also the description on page 23.

Results

After making a search, the results screen is displayed:



- Highlight the searched recording.
- Click on “Lock” to protect the recording from unauthorised access.
- Click “Play” to start playback.

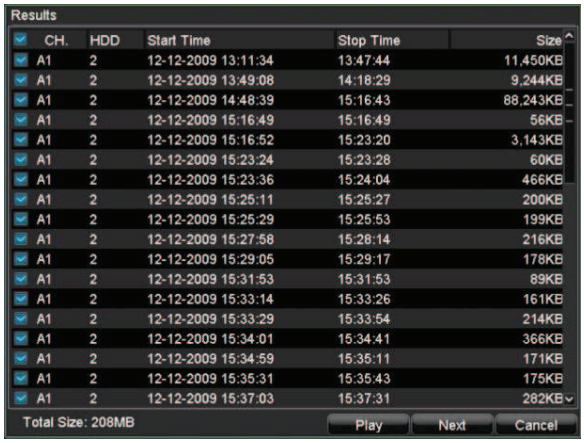
Video Export

Note

The export function is used to store important recordings on connected external media, such as:

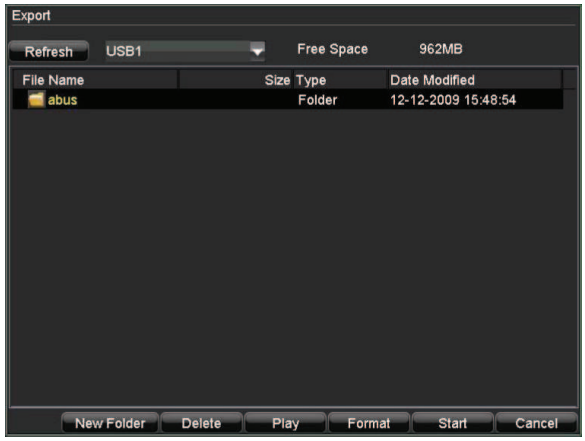
- USB media
- USB HDD
- DVD writer

1. Enter the parameters (see page 30).
2. Click on “Details” to limit the search.
3. Click on **Export** to start the search. The results screen is displayed.



- The file size of the individual recording and the total size of all found recordings are displayed.

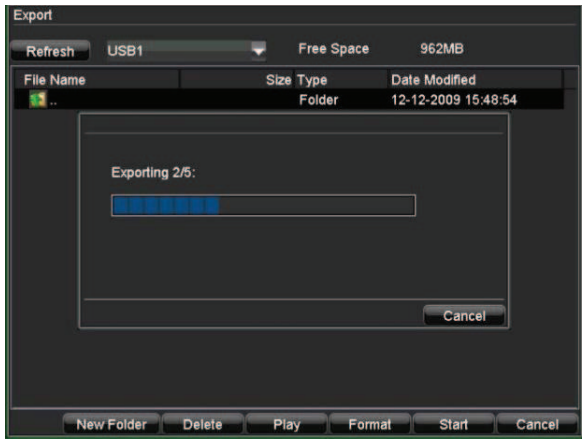
4. Click on **Export** to access the export screen.



1. Select the connected medium used for data storage from the drop-down menu.
2. If the medium is not displayed, click on **Refresh**.

- If the medium is still not displayed, disconnect it from the device and reconnect the medium again. See also the manufacturer’s specifications.

3. Click on **Start** to start the export process. The progress of the export process is then displayed.



Note

After the storage process is completed, the data on the medium can be selected and played on the player (which was also backed up). In this way, you can check whether the export has been made successfully.

HDDs

Note

The device manages one 3.5" SATA hard disk drive.

The installed HDD must be initialised before the device can be used for recording. The device only detects the HDD and its assignment after initialisation has been made.

Warning

All data is deleted from the HDD during initialisation.

Ensure a data backup has been made in good time beforehand.

Installing the HDD

1. Disconnect the device from the mains power and open the cover.
2. Observe the applicable ESD guidelines when handling electronic devices and ensure they are earthed.
3. Do not open the device in rooms with carpets or other surfaces that can become electro statically charged.
4. Avoid bodily contact with all components on the PCB.

Warning

If you have questions regarding the information or cannot find the information you need, please contact your maintenance specialist.

5. Install the HDD and then connect it.
6. Reattach the cover and connect the device to the mains power supply.
7. Switch on the device and start the HDD menu.

Initialising the HDD

HDD Management parameters

“General” tab	
Label	Shows the internal connection number
Capacity	HDD capacity (in GB)
Status	Shows the current status of the HDD: Not initialised Normal Error
Property	• Redundancy: Works redundantly for data security • Read-only: Read-only protection • R/W: Read and write
Type	Local: Device HDD NFS: Network HDD
Free Space	Shows the approximate free memory for recordings
Group	HDD group (1 is preset) Recordings can be assigned to groups
“Set Cameras for HDD Group” tab	
Analog	Overview of cameras Used for accessing the selected camera group
Data Backup on HDD Group	1 to 8

Note

If the initialised HDD is not displayed, check the connections.

1. Select the HDD by ticking the corresponding box.
2. Start the process by clicking on “Init”.
3. Confirm the prompt by pressing **OK**.
4. The status bar shows the progress of the initialisation.
5. The following appears after the process is complete.

Setting the HDD

Note

Define which status the HDD should have:

Read-only: The HDD is write-protected. Recordings are made on the next HDD.

Warning:
If only one HDD is installed and this is set to “Read-only”, then the device cannot make recordings.

Redundancy:
At least two HDDs are installed.
The redundant HDD makes an extra copy of the recordings. This is used as a data backup.

- R/W

  At least one HDD must have the R/W status (Read/Write). Otherwise, no recordings are possible.

Checking the HDD status

The status of each HDD can be checked in the “Maintenance” menu. S.M.A.R.T. information (Self-Monitoring, Analysis and Reporting Technology) is stored in the log data.

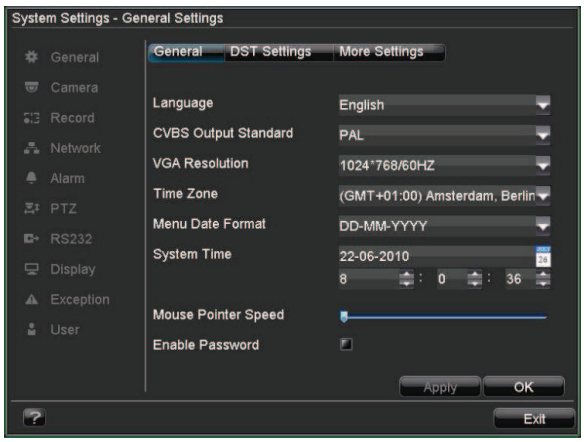
- Call up the log file and search according to the information/S.M.A.R.T. HDD (see page 42).

Setting up the HDD alarm

You can specify alarms to inform you of HDD errors.

- To do this, call up “Exception” in the “System Settings” menu (see page 39).

System Settings



Note

The “System Settings” menu is used to manage all device settings.

Warning

Ensure that the date and time are set correctly.
IMPORTANT:
Subsequent changes to the settings can lead to data loss!

Ensure a data backup has been made in good time beforehand.

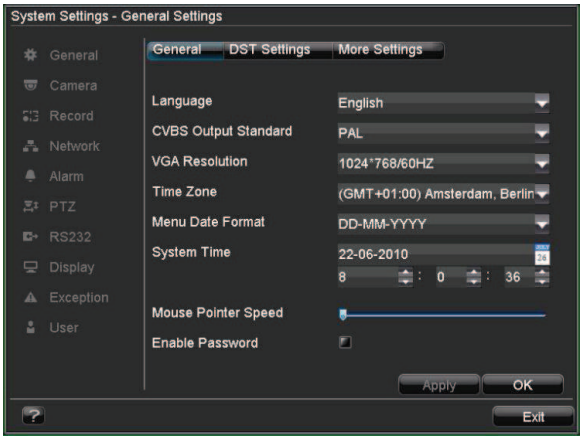
Overview

Menu	Setting	Page
General	Language, video, time, date, mouse pointer, password, time zones and other settings	
Camera	Adding, changing and selecting analogue and IP cameras	36
Record	All recording settings (type, resolution, motion detection, schedule etc.)	21
Network	Required network settings (manual IP, DHCP, PPPOE, DDNS etc.) and network status overview	44
PTZ	PTZ hardware parameters and assignment to camera inputs	25
RS232	No function	38
Display	Display settings and assignment of the event output	20
Exception	Behaviour of the device in exceptional cases (HDD full, network disconnected etc.)	39
User	Adding and changing users, assigning authorisation rights	39

Note

Pay attention to the instructions in the corresponding sections.

General Settings



“General” tab	Setting
Language	Language on the OSD
CVBS Output Standard	PAL / NTSC
VGA Resolution	Resolution on the monitor
Time Zone	GMT (Greenwich Mean Time)
Menu Date Format	MM-DD-YYYY, DD-MM-YYYY, YYYY-MM-DD
System Time	Date and time
Mouse Pointer Speed	Set on the scroll bar (left = low speed; right = high speed)
Enable Password	Box not ticked: In order to enter a menu no password has to be entered. At access by network the password has to be entered. Box ticked: Password must be entered in order to use the menu.

“DST Settings” tab	Setting
DST	Activated when box is ticked
From / To	Date of DST start / end
DST Bias	Daylight Saving Time Bias: Correction of the DST to the reference time
“More Settings” tab	**Setting**
Device Name	Unique specification of the device
Device Number	Used for unique identification when using remote control
Monitor Brightness	Scroll bar (left = darker; right = brighter)
Transparency	1:1, 3:1, 1:3 or Non-transparent – used for managing the display of the OSD in front of the background image
Operation Timeout	1 to 30 minutes – regulates how long the menu is shown
Enable Event Hint	Displays a symbol at the bottom-left of the live image when an event occurs

System Settings: Camera

“General” tab	Setting
Camera	Selection of the camera (only previously activated cameras can be selected)
Camera Name	Clear identification of the camera (e.g. right car park, front entry gate etc.)
Display Camera Name	Box ticked / not ticked
Display Date	Box ticked / not ticked
Display Week	Box ticked / not ticked
Date Format	Format of the displayed date
Time Format	12-hour / 24-hour display
OSD Display	OSD transparent, flashing, non-transparent etc.
OSD Display Position	Screen position of the OSD
Copy To	Selection of whether the settings should be copied to another camera (and if so, to which camera)
Record	See page 21

6. Select “Advanced” to specify the other camera settings.

“Advanced” tab	Setting
Camera	Selection of the camera (only previously activated cameras can be selected)
Image Settings	Brightness, contrast, saturation and colour
Mask	Setting up of privacy zones
Tamper Detection	Setting up of zones
Motion Detection	Setting up of zones for motion detection
Video Loss Detection	Activation according to the definable schedule and notification (display, acoustic, notification of surveillance centre, e-mail)
Copy To	Copies the settings

Setting up of zones

Note

When carrying out camera surveillance, you can define zones that should not be monitored (private zones).
You can also set up zones with special characteristics (e.g. tamper monitoring or motion detection).

1. Activate the zone by ticking the corresponding box and clicking on “Area Settings”.
2. With the left mouse button held down, pull a frame around the desired zone in the live screen.

3. When setting tamper monitoring and motion detection zones, you can open a pop-up menu by right-clicking the mouse. The sensitivity can be set here and the full-screen mode can be activated (for motion detection).
4. To exit the zone settings, right-click the mouse and select **Exit**.

Note

After applying the settings, the set private zone is displayed as a black rectangle in the image.
Zones for tamper monitoring and motion detection are not displayed.

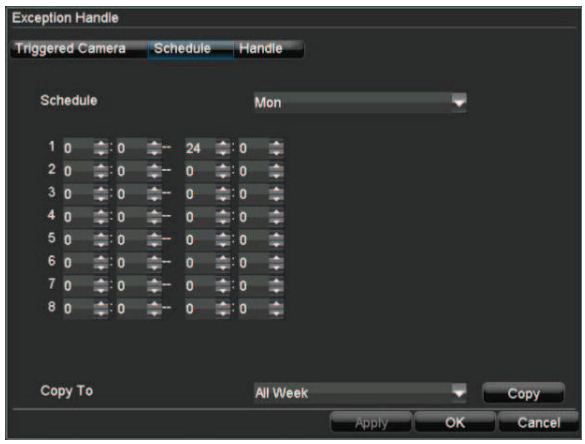
Zones: Schedule and notification

Note

You can assign the surveillance parameters individually and control the notification type for tamper monitoring, motion detection and video loss detection.

Schedule

1. Select **Schedule** in the advanced camera settings.



2. Select the day and enter the schedule.

Note

You can define up to 8 time periods (each from 00:00 to 00:00). The times in the individual periods must not overlap.

3. Select whether the settings should be applied to all days of the week using **Copy To** and confirm with **Copy**.
4. Exit the settings by pressing **OK**.

Notification

1. Select **Handle** in the advanced camera settings.

2. Enter the notification type:

Parameter	Notification
Pop-up Image on Monitor	Message appears on monitor
Audio Warning	The device emits a repeating tone
Notify Surveillance Centre	See page 47
Send Email	An e-mail is sent to a specific e-mail address (see page 47)

3. Click on **Apply** to accept the settings.
4. Click on **OK** to exit the menu.

System Settings: Record

Note

See description on page 21.

System Settings: Network

Note

See separate section on page 44.

System Settings: PTZ

Note

See description on page 25.

System Settings: RS232

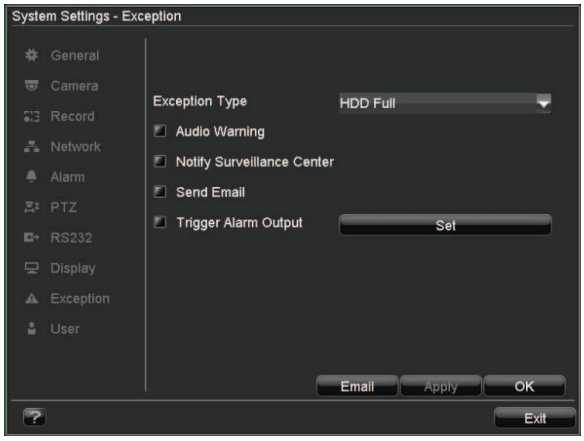
No function.

System Settings: Display

Note

See description on page 20.

System Settings: Exception



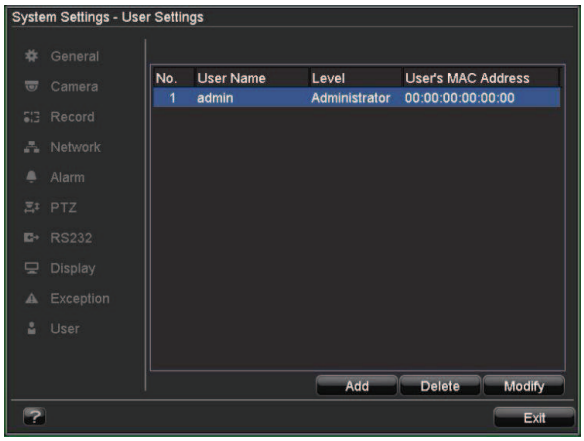
Note

Enter the trigger under “Exception Type”, for example:

- HDD Full
- Disconnected

After doing this, specify the device behaviour as detailed on page 37.

System Settings: User



Warning

Note down the admin password.
The following password is preset

“**1 2 3 4 5**”

You can add new users, delete existing users and change the settings in the “User Settings” menu.

1. To add a new user, select **Add**.

Parameter	Setting
User Name	Unique identification
Password	Access code for the device (device management) Note: Change all passwords on a regular basis, using a combination of letters and numbers. Note down all passwords in a safe place.
Confirm	Enter the access code again here
Level	IMPORTANT: More access rights can be set on the **Manager** level than on the **User** level.
User's MAC	MAC address of the network adapter on the PC of the corresponding user **Note:** This limits access to the PC whose MAC address is entered here!

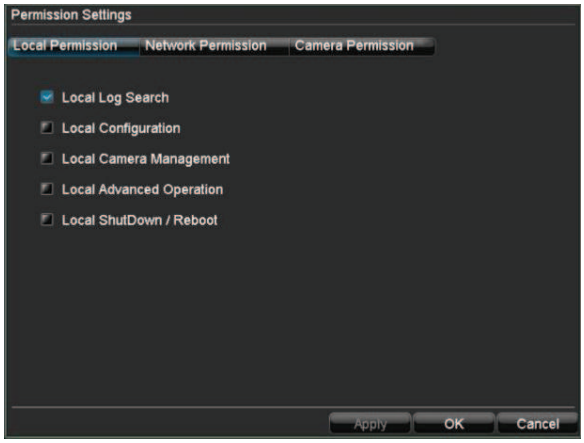
2. Enter the name and password and confirm the password in the field below.
3. Select the level and enter the MAC address.

Warning

Pay attention to the instructions below on assigning access rights.

Setting the access rights

4. Control the access rights of the user by clicking on “Permission”:



Note

The user can make the settings locally (i.e. on the device) or change the parameters.

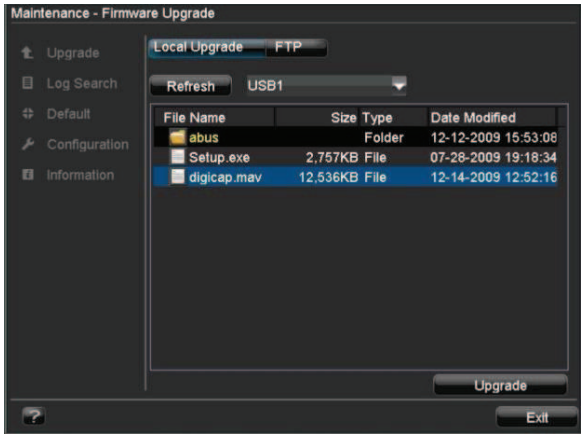
The user can access the device via the network connection.

The “Camera Permission” tab is used to set access rights for individual cameras (network or local).

5. Switch tabs by clicking on the arrows in the tab bar:

Parameter	Setting
Local Permission	Local Log Search Local Configuration Local Camera Management Local Advanced Operation Local ShutDown / Reboot
Network Permission	Network Log Search Network Configuration Network Camera Management Control Serial Connections Video Output Control Two-way Audio Network Advanced Operation Network ShutDown / Reboot
Camera Permission	Remote Live View Local Manual Recording Start Remote Recording Local Playback Remote Playback Local PTZ Control Remote PTZ Control Local Data Export

Maintenance



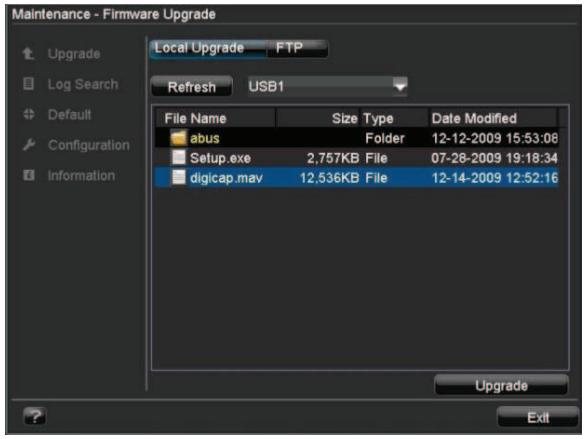
Note

This menu is used for device maintenance, and should only be operated by experienced users.

Menu	Setting	Page
Upgrade	Carries out a firmware upgrade	
Log Search	A search of recordings or information (S.M.A.R.T. HDD status) can be made in the log file according to certain criteria (exceptions, operation or information).	42
Default	System reset	43

Menu	Setting	Page
Configuration	Used to export or import the settings	43
Information	Device information (serial number, firmware status etc.)	43

Upgrading the device



Note

A device upgrade can be made from a USB device or over the network via FTP.

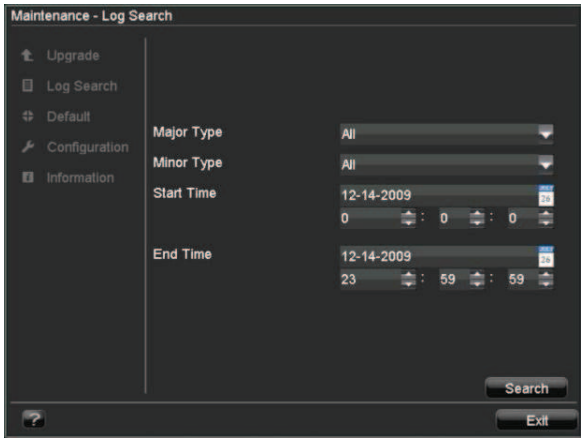
- Copy the upgrade file (*.mav format) to the main directory of a USB stick.
- Connect the USB stick to a USB port on the device.

1. Select the USB port (click on “Refresh”, if necessary).
2. Select the upgrade file and click on “Upgrade”.
3. Wait until the device reboots.
4. Check the firmware status in the “Maintenance” menu under “Information”.

Note

- Upgrades via FTP are made in the same way as detailed above. The PC must be located in the same local network.
- Set up a PC as an FTP server.
- Enter the IP address of the FTP server.

Log Search



Note

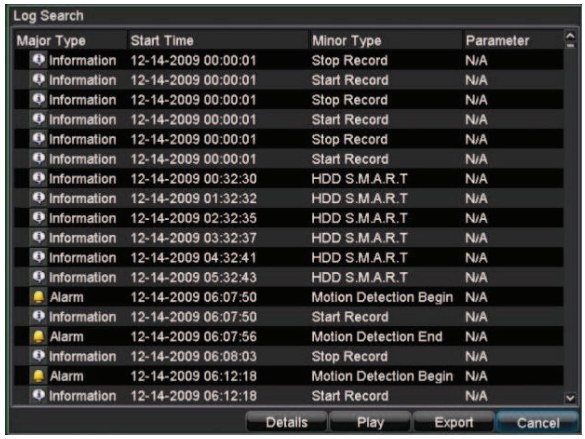
An event search can be made according to the following main types, events and parameters:

- All
- Exception
- Operation
- Information

Type	Minor type / sub-parameter
All	-
Exception	• All • Video Signal Loss • Video Signal Exception • Login Error • HDD Full • HDD Error • IP Address Conflict • Network Disconnected • Data Record Failed • IP Camera Connection Failed • IP Address Conflict with IP Camera

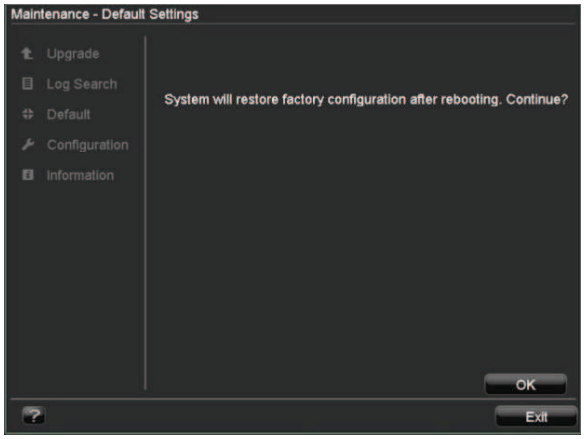
Type	Minor type / sub-parameter
Operation	• All • Switch On • ShutDown • Irregular ShutDown • Local Reboot • Local Login / Local Logout • Local Settings • USB • Local Recording Begin / End • Local PTZ Control • Local File Locked • Others
Information	• All • HDD Information • HDD S.M.A.R.T. • Start Record • Stop Record • Delete Obsolete Recording • Network HDD Information

1. Select the event you wish to search for in the log, then select the sub-parameter.
2. Enter the date and time under “Start Time” and “End Time”, then click on **Search**.
3. The results are then displayed:



- Click on **Details** to see more detailed information.
- Click on **Play** to start the recording for the event, when necessary.
- Click on **Export** to back up the log file on a USB medium.

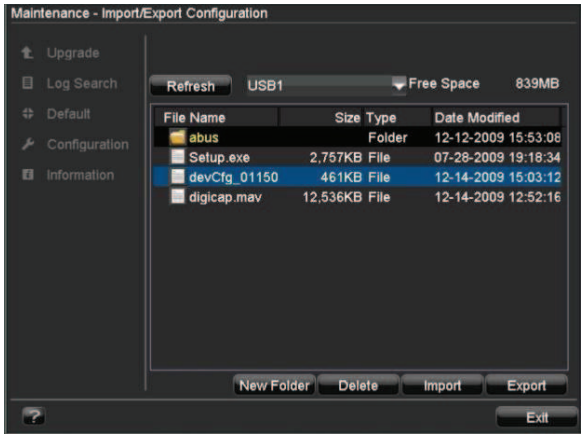
Default Settings



Note
In this process, the device is reset to the factory default settings.

Warning
All settings made since the start of operation are deleted (cameras, recording settings, PTZ)!
Avoid data loss by backing up the settings in advance. These can be imported again following the system reset.

Import / Export Configuration



Note
The configuration data contains all settings made on the device since the start of operation. This data can be saved on a USB medium. You can then configure another device identically, for example.

Information

Note
The technical data of the device is displayed in the information menu.
This can be useful for support queries, for example.

ShutDown

Note

- Select “Lock” to lock the operating menu.
- Select “ShutDown” to switch off the device.
- Select “Reboot” to reboot the system (switch off and back on).

See also page 15.

Network

General information

Correct network settings are essential in the following cases:

- When using remote control of the device and surveillance over your server

Note

Please read the following basic instructions before setting up the device.

A network is a connection of at least two network-capable devices.

Transmission types:

- Wired networks (e.g. CAT5 cable)
- Wireless networks (WLAN)
- Other transmission types (Powerline)

All systems have certain similarities, but can also differ in many ways.

Terms and definitions

An overview of relevant terms when using the device in a network can be found below.

Parameter	Setting
IP address	An IP address is the unique address of a network device within a network. This address may only appear once within a network. Certain IP address ranges are reserved for public networks (e.g. the Internet).
Private address range	e.g. 10.0.0.0 – 10.255.255.255 Subnet mask: 255.0.0.0 172.16.0.0 - 172.31.255.255 Subnet mask: 255.255.0.0 192.168.0.0 - 192.168.255.255 Subnet mask: 255.255.255.0
Subnet mask	A subnet mask is a bit mask used for making decisions and assignments during routing. 255.255.255.0 is the standard subnet mask in home networks.
Gateway	A gateway is a network device which allows all other network devices to access the Internet. This can be the computer connected to the DSL modem or – usually – the router or access point within the network.
Name server	The name server is responsible for assigning a unique IP address to a web address or URL (e.g. www.google.de). Also known as DNS (Domain Name Server). When a domain name is entered into a browser, the DNS searches for the corresponding IP address of the server and forwards the query on. The IP of the provider's DNS can be entered here. However, it is often sufficient to select the IP of the gateway. This then forwards the queries independently to the provider DNS.
DHCP	The DHCP server automatically assigns the IP address, subnet mask, gateway and name server to a network device. DHCPs are available in current routers. The DHCP service must be specially set and activated (see the corresponding manual for more information). Note: When using fixed IP addresses and a DHCP server, make sure that the fixed IP addresses are outside the address range assigned by DHCP. Otherwise, problems could occur.
Port	A port is an interface used for communication by different programs. Certain ports are fixed (21: Telnet, 23: FTP), whilst others can be freely selected. Ports are important for different applications (e.g. external access to the device over a browser).
MAC address	The MAC address (Media Access Control or Ethernet ID) is the specific hardware address of the network adapter. This is used for the unique identification of the device in a computer network.

Network layout

The device must be physically connected to the network over a CAT5 cable (see connections on page 3).

Note

Pay attention to the specific information and instructions on the network devices.

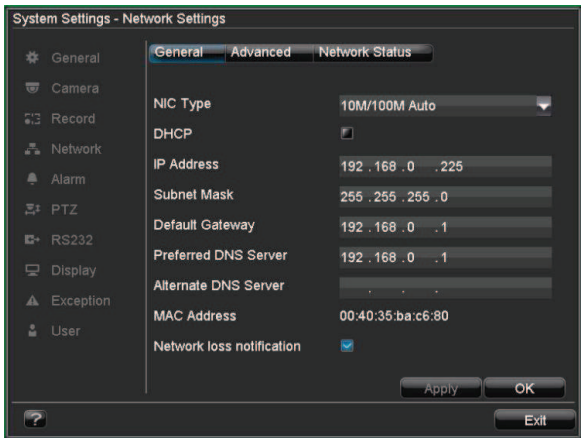
Several switches, routers and access points can be connected to each other. Firewalls and other security software can affect the network.

Warning

When using a router, the network clients (e.g. the recorder) can be connected to the Internet and vice versa.
Make sure to use protective measures to prevent unauthorised external access (e.g. firewall, changing passwords, changing ports)!

Network configuration

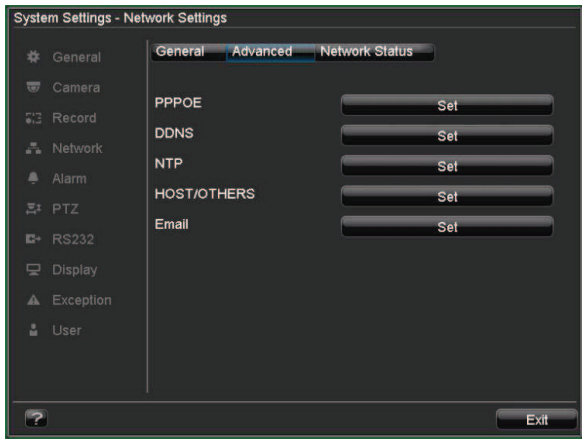
The device must be configured using the “System Settings” and “Network Settings” menus.



Parameter	Setting
NIC Type	Set the transmission speed of the installed network card here. Tip: 10M/100M
DHCP	Tick the box if the IP addresses are assigned dynamically via DHCP in the network. DHCP activated: Subsequent entry fields are inactive (parameters assigned via DHCP). Note: If the IP addresses are assigned manually, ensure that DHCP is not active (box not ticked).
IP Address	Address of the network device in the network (manual assignment)
Subnet Mask	Usually 255.255.255.0
Default Gateway	Address of the gateway for Internet access
Preferred DNS Server	Address of the Domain Name Server (usually the IP address of the gateway)
Alternate DNS Server	IP address of the alternative DNS server
MAC Address	Hardware address of the installed network card

Advanced network configuration

Specify further parameters for the network configuration in the “Advanced” tab.



Parameter	Setting
PPPOE	PPPOE is used on ADSL connections and when using modems in Germany. Click on “Set” to enter the access data (ID and password) for your provider.
DDNS	Server for Dynamic Domain Name System management. Used for updating host names or DNS entries
NTP	Network Time Protocol Server for time synchronisation
HOST / OTHERS	Communication and HTTP port.
Email	Used to specify the e-mail settings which are sent as an e-mail to a specific address in the event of an alarm.

Setting up PPPOE manually

1. Tick the PPPOE box, enter the user name (Internet access ID) and password, then confirm the password.
2. Apply the settings by pressing **OK**.

Setting up DDNS manually

1. To use the ABUS DDNS function, you must first set up an account under www.eytronserver.com. Please note the FAQs on the website when doing this.
2. Tick the DDNS box, enter “ABUS DDNS” as the “DDNS Type”, then enter www.eytronserver.com or “62.153.88.107” under “Server Address”.
3. Apply the settings by pressing **OK**. The IP address of your Internet connection is now updated on the server every minute.

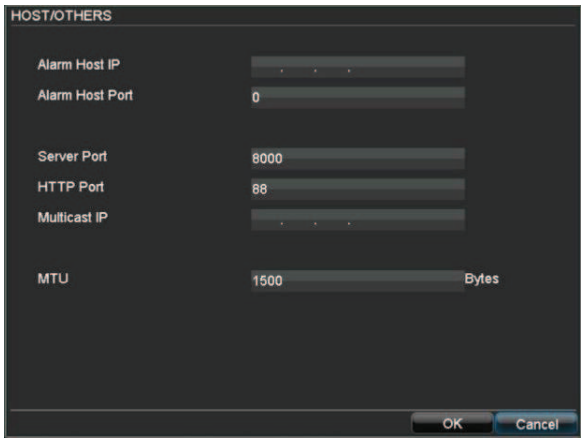
Setting up NTP manually

Note

The recorder can synchronise the time with an external server. Several server addresses are available on the Internet for this purpose.

1. Tick the NTP box and then enter the interval at which the synchronisation should be made again. Enter the IP address of the NTP server and the NTP port.
2. Apply the settings by pressing **OK**.

Setting the HOST / OTHERS



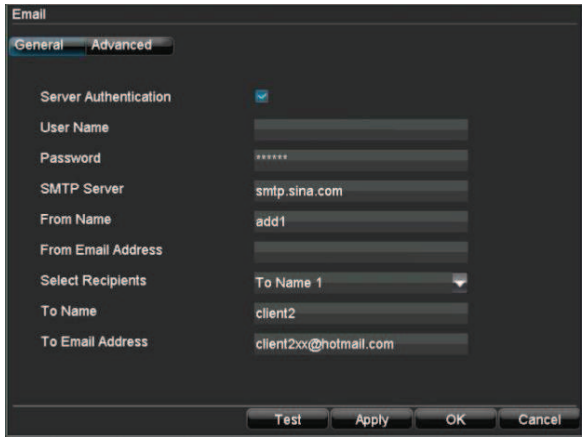
Parameter	Setting
Alarm Host IP	No function
Alarm Host Port	No function
Server Port	Port for data communication
HTTP Port	Port for web server
Multicast IP	In order to minimize traffic you can enter a Multicast IP. The IP address has to match the IP address of the PC running the CMS software.
MTU	Describes the max. size of the largest protocol data .

Note

Server port 8000 and HTTP port 80 are the standard ports for remote clients and remote Internet browser access.

Setting up an e-mail address

In the event of an alarm, the device can send a message by e-mail. Enter the e-mail configuration here:



Parameter	Setting
Server Authentication	Tick the box when authentication is made on the server of the Internet provider
User Name	E-mail account at the provider
Password	Password connected to the e-mail account
SMTP Server	SMTP server address of the provider
From Name	Name of the sender
From Email Address	Corresponding e-mail address for the e-mail account
Select Recipients	Select three possible recipients for the e-mail
To Name	Enter the name of the recipient here
To Email Address	Enter the e-mail address of the recipient here
“Advanced” tab	**Setting**
Attached JPEG File	Tick the box when camera images should also be sent with the e-mail as photo files
Interval	Select the interval between the individual recordings (2 to 5 seconds)
SMTP Port	Enter the SMTP port here (Default: 80)
SSL	Tick the box to activate the e-mail encryption

1. Enter the parameters of the e-mail notification.
2. Click on **Test** to send a test e-mail.

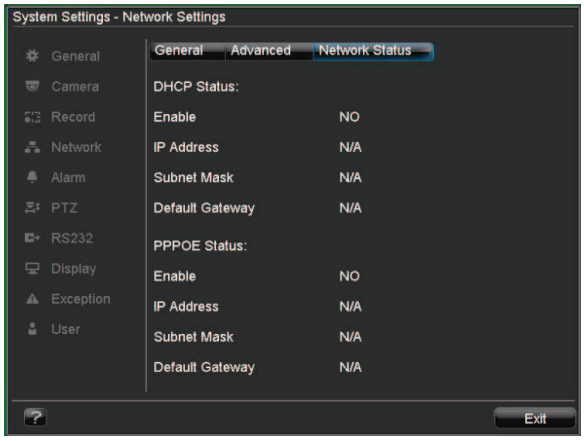
Note

The device sends an e-mail to the specified recipients.

If the e-mail is not received, check the settings and correct them.
If necessary, check the spam filter of your e-mail client.

Network Status

Click on the “Network Status” tab to see an overview of the current network configuration.



Parameter	Setting
DHCP Status:	When DHCP is active, the corresponding parameters are shown. “N/A” is displayed when DHCP is inactive.
PPPOE Status:	Shows whether an Internet connection is established during manual set-up. Also displays the IP address, subnet mask and defined default gateway. Note: If a router is used which is set up as the gateway / DSL modem, then the PPPOE settings of the router are used. The display then shows “N/A”.

Troubleshooting

Before calling the Service department, read the following information to determine the possible cause of a malfunction.

Malfunction	Cause	Solution
No power	Mains cable not connected	Connect the mains cable securely to the socket
	Power switch set to OFF	Turn the power switch to ON
	No current in the power socket	Use another device on the socket, where necessary
No image	Screen not set for reception	Set the correct video input mode until an image from the recorder appears
	Video cable not connected properly	Connect the video cable securely
	Connected modem is switched off	Switch on the monitor
Camera images black and white and blurred, despite colour camera being installed	If no cameras are connected when the recorder is started, then the recorder is started automatically in NTSC mode. If only PAL colour cameras are connected, then these are displayed as black and white and blurred	Connect the cameras before starting the recorder. The recorder automatically detects whether a PAL or NTSC signal is present and switches to the correct mode. You can set the mode (see page 35)
HDD is not working	Connection cables not connected properly	Connect the cables securely
	HDD defective or not system-compatible	Replace with a recommended HDD
USB port not working	Device not supported	Connect a compatible USB medium (USB 2.0)
	USB hub is in use	Connect the USB medium directly
Network access not possible	Network cable connections are loose	Connect the network cable
	Network settings are incorrect (DHCP, IP address etc.)	Check the network configuration and correct it, when necessary (see page 45)
Remote control is not working	Batteries inserted with the wrong polarity or are empty	Replace the batteries. To control the device with the remote control, point it at the remote control sensor on the device
	Remote control too far away from the recorder	Use the remote controller within 7 metres from the device
	Signal blocked by obstruction between the remote control and recorder	Remove the obstruction
	Lighting too bright or fluorescent tubes in use?	Switch off strong fluorescent lighting in the immediate vicinity
Recording not possible	No HDD or HDD is not initialised	Install and initialise the HDD
Sudden deactivation of the device	Temperature inside the device is too high	Clean the device and remove any obstructions from the ventilation area

Device cleaning and care

Note

- Your device requires no maintenance.
- Protect the device from dust, dirt and moisture.

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Technical data

Subject is to alterations and errors. The dimensions are approximate values.

TVVR30003 4-channel compact digital recorder		
Video compression	H.264	
Hybrid-compatible	-	
Camera inputs	4 x BNC (1.0 V p-p, 75 Ω)	
Camera outputs	-	
IP cameras	-	
IP camera protocols	-	
Monitor outputs	Monitor: 1 x BNC (1.0 V p-p, 75 Ω) VGA: 1 x VGA	
Operating mode	Triplex	
Resolution (live view)	PAL: 704 x 576 (4CIF), NTSC: 704 x 480 (4CIF) VGA 1024 x 768 (60 Hz)	
Resolution @ frame rate per camera (recording)	PAL: 352 x 288 (CIF) @ 25 fps, 704 x 576 (4CIF) @ 25 fps	NTSC: 352 x 240 (CIF) @ 30 fps, 704 x 576 (4CIF) @ 30 fps
Total frame rate	PAL: 100 fps, NTSC: 120 fps	
Compression levels	6	
Pre-alarm/post-alarm memory	0 ~ 30 sec. / 5–900 sec.	
Storage medium	1 x SATA HDD	
Data backup	2 x USB 2.0	
Views	1/4	
Recording modes	Manual, Schedule	
Search modes	By Event, date and time	
Alarm inputs (NO/NC)	-	
Relay outputs	-	
User levels	2 (max. 31 users)	
Network connection	RJ45 10/100 Mbps	
Parallel network access	24 camera connections	
Network functions	Live view, playback, data export, settings	
DDNS	√	
NTP	√	
PTZ control	RS-485	
PTZ protocols	LG-MULTIX, PELCO-D, PELCO-P, Samsung	
Alarms	Acoustical, OSD signal, email	
Audio	-	
Control	Mouse, remote control (not included in scope of delivery)	
Software	ABUS CMS Software	
OSD languages	German, English, French, Dutch, Danish	
Power supply	12 V DC	
Power consumption	<10 W	
Operating temperature	-10 °C ~ +55 °C	
Dimensions (WxHxD)	315 x 50 x 210 mm	
Weight	≤ 2.8 kg	
Certification	CE	

HDD storage capacity

In addition to the actual storage capacity of the installed HDD, the required storage space for recording and surveillance depends on the set resolution and frame rate of the recording.

TVVR30003

Continuous recording, 1 x 1 TB HDD:

Number of cameras	Resolution	FPS	Recommended bit rate	Recording time
4	CIF	25	512	**41 days, 5 hours**
4	CIF	16	384	**54 days, 23 hours**
4	CIF	8	192	**109 days, 22 hours**
4	4CIF	6	128	**164 days, 21 hours**
4	4CIF	6	512	**41 days, 5 hours**

30 days continuous recording:

Number of cameras	Resolution	FPS	Recommended bit rate	Number of HDDs
4	CIF	25	512	**1 x 1 TB**
4	CIF	16	384	**1 x 1 TB**
4	CIF	8	192	**1 x 1 TB**
4	4CIF	6	128	**1 x 1 TB**
4	4CIF	6	512	**1 x 1 TB**

On the included CD you can find a program in order to calculate the required amount of memory. In addition you find this software for download on our homepage together with the ABUS CMS software.

Disposal

Information on the EU directive on waste electrical and electronic equipment

To protect the environment, do not dispose of the device with domestic waste at the end of its service life. It can be disposed of at one of the appropriate collection points in your country. Please obey your local regulations when disposing of material.

Dispose of the device in accordance with EU directive 2002/96/EC – WEEE (Waste Electrical and Electronic Equipment). If you have any questions, please contact the department of your local authority which is responsible for waste disposal. Used equipment can be disposed of, for example, by your local or municipal authority, the local waste disposal company or your dealer.

Information on handling batteries

- Always insert batteries with the correct polarity. Never attempt to recharge the batteries supplied and do not throw them into naked flames under any circumstances. Do not use different batteries at the same time (old and new, alkaline and zinc-carbon etc.). Remove the batteries if the device is not used for a long period of time. If used improperly, there is a risk of explosion and leaking batteries!
- Take environmental protection into account – used batteries should not be disposed of in domestic waste! They must be taken to a collection point for used batteries.
- Make sure that batteries are kept away from small children. Children may put batteries in their mouths and swallow them. This can cause serious harm to their health. If this happens, consult a doctor immediately.
- Do not charge normal batteries, heat them up or throw them into naked flames (they may explode).
- Change low batteries in good time.
- Always change all the batteries at the same time and use batteries of the same type.

Important

Leaky or damaged batteries can cause chemical burns on contact with the skin.

- ▸ In this case, wear protective gloves.
- ▸ Clean the battery compartment with a dry cloth.

Important information on disposing of batteries

Your product uses batteries which are subject to the European directive 2006/66/EC and may not be disposed of with domestic waste.

Find out about the regulations for the separate collection of batteries which apply in your country.

Proper disposal of batteries helps prevent harm to health and the environment.

Batteries that contain harmful chemicals are labelled with these signs:

Pb = battery contains lead

Cd = battery contains cadmium

Hg = battery contains mercury

Information on the European RoHS directive

The device complies with the RoHS directive.

Compliance with the RoHS directive means that the product or component does not contain more than the following maximum concentrations of the following substances in homogeneous materials, unless the substance is part of an application that is excluded from the RoHS directive:

a) 0.1% lead (by weight)

b) Mercury

c) Hexavalent chromium

d) Polybrominated biphenyl (PBB) and polybrominated diphenyl ether

e) 0.01% cadmium (by weight)

Glossary

Overview of specialist terms

1080i

HDTV image signal with 1080 pixels and interlaced display.

16:9

Cinematographic aspect ratio on widescreen displays.

720p

HDTV image signal with 1280 x 720 pixels and progressive display.

CIF

Common Intermediate Format

Originally planned for converting PAL to the NTSC standard. CIF corresponds to a video resolution of 352 x 288 pixels (2CIF = 704 x 288 pixels; 4CIF = 704 x 576 pixels).

CINCH

Socket type used for analogue audio or CVBS video signals.

CVBS

Colour, Video, Blank and Sync – The simplest variation of video signals (also known as composite video). The image quality is comparatively low.

DDNS

Dynamic Domain Name System entry

Network service which provides and updates IP addresses of its clients in a database.

DHCP

Dynamic Host Configuration Protocol

Network protocol which allows the automatic connection of devices (clients) in existing networks. DHCP servers (e.g. Internet routers) automatically assign the IP address, network mask, gateway, DNS server and WINS server (when required). Only the automatic acquisition of IP addresses must be activated for the client in this case.

Domain

Name used for the identification of websites on the Internet (e.g. www.abus-sc.de).

Dual Stream

Dual stream is a video transmission method. A high-resolution recording and lower-resolution transmission are made over the network, for example. The main stream has a 4CIF resolution and the sub-stream has a CIF resolution.

DVR

Digital Video Recorder – A device used for recording different video and audio sources (analogue, digital). The data is compressed for recording and saved on hard disk drives (HDD).

H.264

(MPEG-4 AVC) – Standard method for the highly-efficient compression of video signals. Used on Blu-ray discs or video conference systems, for example.

HDD

Hard Disk Drive

Digital data storage on computers or DVRs.

GIGABYTE

Unit of capacity for storage media (HDD, USB, SD/MMC cards).

HDVR

Hybrid DVR – DVR used for recording analogue cameras and network cameras.

http

Hypertext Transfer Protocol

Method for transmitting data across networks. Primarily used for displaying websites in a browser.

INTERLACED

Method for improving the picture quality of a video signal without consuming extra bandwidth (scan pattern on every second line).

IP address

An address in the computer network based on the Internet protocol. Allows different devices to identify themselves in a network so that they are accessed specifically.

JPEG

Compression method for photo images with minimal loss. Most digital cameras save photos in JPEG format.

MPEG

Moving Picture Experts Group – International standard for the compression of moving images. On some DVDs, the digital audio signals are compressed and recorded in this format.

NTP

Network Time Protocol

Method for synchronising the time across networks. SNTP (Simple Network Time Protocol) is also available, offering a simplified protocol.

NTSC

Standard television format in the USA. The method is different from the European PAL system in certain ways. A full-screen NTSC image is comprised of 480 visible lines and a total of 525 lines. 60 half-images are displayed per second. Compared to PAL, the system is more susceptible to colour errors.

PAL

Phase Alternating Line – European colour TV system. Uses 576 visible image lines. Together with the lines used for signal management, a full-screen image is comprised of 625 lines. 50 half-images are displayed per second. The phase position of the colour signal changes from line to line in the image.

PANEL

Interior of a flatscreen display (e.g. LCD or plasma panels).

PC

Personal Computer – Can be used as a remote site, either with the software supplied or over a browser.

Pixel

Short for “picture element”, the smallest unit for digital image transmission or display.

PIP

Picture in Picture – Where two signal sources are shown on the screen at the same time. The second signal source is stored above the first.

PPPoE

PPP over Ethernet (point-to-point protocol)

Network transmission method used for establishing a connection over dial-up lines. Used in ADSL connections, for example).

PROGRESSIVE

Method for displaying, storing or transmitting moving images in which all the lines of each frame are drawn in sequence. This is in contrast to the interlacing used in traditional television systems.

PTZ

Pan-Tilt-Zoom

Pan, tilt and zoom function on motor-driven cameras.

RESOLUTION

Normal PAL television systems show images in 576 lines, normally with 768 pixels. HDTV works with at least 1280 x 720 pixels.

SCREEN SIZE

Size of the display from the bottom-left corner to the top-right corner in inches or centimetres.

Browser

Program for viewing websites on the Internet.

USB

Universal Serial Bus

Serial bus connection, used for connecting media whilst in operation. Maximum data rate for USB 2.0: ca. 320 Mbit/s (ca. 40 MB/s).

VGA

Video Graphics Array – Standard interface for analogue video signals in PCs (primarily deals with RGB signals).

ZOLL (inches)

Typical unit of screen size. One inch is equivalent to 2.54 centimetres. The most common sizes of 16:9 displays are 26 inch (66 cm), 32 inch (81 cm), 37 inch (94 cm), 42 inch (106 cm), 50 inch (127 cm) and 65 inch (165 cm).

Internal HDD

The internal hard disk drive (HDD) is very sensitive. Operate the device according to the following instructions in order to avoid drive errors. Important recordings should be backed up on external media to avoid unexpected data loss.

Note

- Do not move the device during operation.
- Moisture inside the device can condense and lead to HDD malfunctions.
- When the device is turned on, never remove the mains plug from the socket or interrupt the power supply using the safety switch.
- Do not move the device immediately after switching it off. To move the device, carry out the following steps:
  1. Wait until OFF has been shown on the display for at least two minutes.
  2. Remove the mains plug from the socket.
  3. Move the device.
- Data on the HDD can be lost in the event of a power failure during operation. Use an uninterruptible power supply (UPS)!
- The HDD is very sensitive. Improper use or unsuitable surroundings can damage the HDD after some years of use. This may be indicated by the playback stopping unexpectedly or visible “mosaic” effects in the image. In some circumstances, there are no prior signs of a HDD malfunction.
- In the event of a malfunction, no recordings can be played. The HDD must be replaced in this case.

ABUS Digital Recorder

TVVR30003

Manufacturer:
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